

# **SYSTEMS AND METHODS FOR SCHOOL DISTRICTS AND MUNICIPALITIES TO MAXIMIZE INTEREST EARNINGS ON THEIR INVESTMENTS**

This application claims the benefit of provisional application serial number 60/400,636 filed July 31, 2002, the complete disclosure of which is incorporated herein by reference.

## **BACKGROUND OF THE INVENTION**

### **1. Field of the Invention**

The invention relates to an electronic bidding system. More particularly, the invention relates to a system for enabling an investor, especially a municipal investor, i.e., a school district or a municipality, to obtain the best rate of return on a short term cash investment.

### **2. State of the Art**

Due to the manner in which school districts and municipalities and other private and public organizations acquire and disburse funds, they often possess relatively large quantities of cash for relatively short periods. It is the fiduciary responsibility of these entities to invest idle cash, thereby providing tax relief to local residents. Indeed many states require that municipalities invest idle cash in safe fixed rate instruments such as U.S. Treasury Bills, insured certificates of deposit, etc.

Although there are many types of electronic financial bidding systems available to consumers as well as sophisticated investors, none of them addresses the specific needs of school districts and municipalities and other private/public organizations. For example, U.S. Patent Number 5,905,974 to Fraser et al. discloses an automated auction processor which includes transaction management of auction-based income

instruments, such as T-bills, using a linked computer processing system, such as ETHERNET, LAN, WAN, etc. The system is generally designed to assist the sellers of income instruments which have traditionally been sold at auction. It is not designed to assist an investor in obtaining the best short term rate of return for a relatively large cash investment.

U.S. Patent Number 5,915,209 to Lawrence discloses a computer implemented, online bond trading system which includes a selling trader placing the bond in a database that can be accessed by a plurality of bidding traders such that the bonds are held at auction for a predetermined period of time for the bidders, after which the highest bidder receives the bond. Clearly, this system works against the interests of the bond purchaser and favors the bond seller.

U.S. Patent Number 5,966,699 to Zandi discloses a system and method for conducting an electronic loan auction over a computer network, such as the Internet, which includes receiving a loan application from a borrower which is posted in a database, the database available to various lenders which may submit bids for the loan during a preset period of time, i.e., the length of the auction time. This system also works against the interest of the investor (lender) to obtain the lowest rate of return thereby benefitting the borrower.

U.S. Patent Number 6,161,099 to Harrington discloses a system for auctioning municipal bonds. This is, of course, quite the opposite of the situation addressed by the present invention. Harrington is concerned with the situation where a municipality needs to borrow money, usually over a long term. The present invention is concerned with the situation where a municipality needs to invest money, usually over

a short term.

U.S. Patent Number 6,397,197 to Gindlesperger discloses a system and method for competitive bid selection from a plurality of print and other customized information product vendors based on a database of vendor records. This is indeed a very specialized type of bidding system.

U.S. Patent Number 6,438,526 to Dykes discloses an automated system for collecting and disseminating loan information over a network connection includes a server which receives loan data, including daily loan data, from lenders and stores the loan data in a database. A web server provides to users (e.g., brokers, correspondents, or retail loan customers) interactive web content including loan information and a list of loan criteria which would affect the quoted points, rate, cap, or margin associated with a particular loan. The web server receives a user's applicable loan criteria selected from the list of possible loan criteria and uses that applicable loan criteria and the loan data from the lender to create a list of adjustments to the points, rate, cap or margin. A quoted interest rate and the list of applicable adjustments are transmitted by the web server to the user. As with many of the known electronic financial bidding systems, this system is aimed at getting the lowest interest rate for a borrower.

Published U.S. Patent Application Number 20020169708 to Chittenden discloses a method for competitively sealed bidding on debt obligations over a computer network. The data associated with a debt obligation desired by a borrower includes a bid due date. The data associated with a bid includes a rate of the debt obligation by a lender to underwrite the debt obligation desired by the borrower. This

is yet another system aimed at getting the lowest interest rate for a borrower.

Published U.S. Patent Application Number 20020138421 to Monlux discloses an on-line financing application service (FAS) equipped with functionalities to enable multiple funding sources to create multiple financing program offerings on-line. The FAS also facilitates the funding sources to selectively associate selected ones of the financing program offerings to multiple brokers/vendors, who in turn may create derivative financing program offerings, apply for financing, apply on behalf of their clients, or facilitate direct application by their clients, under selected ones of the financing program offerings on-line. The FAS is also equipped to allow an application submitted for consideration under a financing program offering to be automatically approved or referred to another rate sheet for quoting another financing program offering of the same/different funding source/broker for consideration. In one embodiment, the automatic approval or referral is based at least in part on the business profile and credit information of the applicant. Although somewhat more sophisticated than many of the other systems, this system is still aimed towards getting the lowest interest rate for a borrower.

Published U.S. Patent Application Number 20020077955 to Ramm discloses a full maturity option bond fund that provides a bond fund wherein the investors have the option of specifying maturity dates for their investment that coincide with the maturity date of debt securities held by the bond fund manager. Like the bond fund systems described above, this system assists municipalities seeking to borrow money rather than to invest it.

Published U.S. Patent Application Number 20020029188 to Schmid discloses a method and apparatus to facilitate competitive financial activities among myriad lenders on behalf of one borrower which includes the use of an online system that transmits information to lenders regarding the loan request from which bids are received. The bids are posted to an electronic database from which the borrower may view and select that loan that best fits their needs. This is still another method for obtaining the lowest possible interest rate for a borrower.

Published U.S. Patent Application Number 2002002640 to Hueler discloses a system and method for facilitating electronic bidding between stable value fund managers and stable value contract issuers. A fund manager creates an electronic bid invitation, and identifies the contract issuers from whom a responsive bid is desired. The electronic bid invitation is electronically dispatched to the designated issuers in order to prompt the issuers to furnish the bid. Electronic bid responses are submitted by the designated issuers back to the manager in response to the electronic bid invitations. The manager identifies the best bid response from all of the bid responses received. The issuer who submitted the most favorable bid response is notified through an electronic transmission that the manager would like to enter into an investment contract with that issuer, at terms substantially defined in the seller's winning bid response.

From the foregoing, it can be appreciated that many different types of electronic financial bidding systems have been patented and proposed. It will also be appreciated that most of the patents and published applications are directed toward servicing debtors, i.e. allowing borrowers to find the lowest interest rate for a loan. Only two of the documents described above (Hueler and Ramm) are specifically related to

servicing investors. However, the Hueler disclosure is very technical and relates to very esoteric financial transactions among fund managers and contract issuers. The Ramm disclosure is specifically limited to bond funds.

None of the documents described above discloses or suggests a system for allowing an investor especially a municipal investor to obtain the best rate of return on a short term cash investment.

### SUMMARY OF THE INVENTION

It is therefore an object of the invention to provide a method by which an investor may solicit bids from banks and/or financial institutions to obtain the best rate of return on an investment.

It is also an object of the invention to provide such a method which is well suited for short term investments.

It is another object of the invention to provide such a method which is well suited for investors such as school districts, municipalities and other private and public organizations.

It is still another object of the invention to provide such a method which is implemented via computer and telecommunications apparatus.

In accord with these objects which will be discussed in detail below, the methods of the present invention include providing means by which an investor can

solicit bids from banks and/or financial institutions (hereinafter "investees" or "bidders") to obtain the best rate of return on an investment. According to the presently preferred embodiment, these methods are implemented via a computing and telecommunications system, e.g. a secure server coupled to the internet. Exemplary methods according to the invention permit an investor to submit an investment for bid, to review bids submitted, and to select the desired bidder with whom to make the investment. These exemplary methods also permit bidders to review the investments available for bidding and to submit bids for the desired investments. The systems of the invention also include portfolio management features for the investors such as providing wire transfer notices, reporting of existing investments, past investments, and pending investments subject to bidding. For the bidders, the systems of the invention permit review of pending auctions, the placement of bids, review of auction results, review of future auctions, review of previous auction results and review of investment history.

Additional objects and advantages of the invention will become apparent to those skilled in the art upon reference to the detailed description taken in conjunction with the provided figures.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a screen shot of a main menu for investors in a system according to the invention;

Figure 2 is a screen shot of the data entry screen for entering an investment;

Figure 3 is a screen shot of a preview/confirmation;

Figure 4 is a screen shot of a main menu for bidders in a system according to the invention;

Figure 5 is a screen shot of a listing of upcoming auctions;

Figure 6 is a screen shot of a bidding selection;

Figure 7 is screen shot of a bidding entry;

Figure 8 is a screen shot of a bidding entry and investment detail view;

Figure 9 is a screen shot of a bidding entry and bid ranking view;

Figure 10 is a screen shot of a bid acceptance/award list;

Figure 11 is a screen shot of the investment award entry screen; and

Figure 12 is a screen shot of the award notice transmit screen.

#### BRIEF DESCRIPTION OF THE APPENDIX

The attached CD-ROM appendix is incorporated herein by reference. The CD-ROM includes all of the source code for the system of the invention in a single text file (size-450 KB; created 2002)



## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

According to the presently preferred embodiment, the methods of the invention are implemented via a computing and telecommunications system, e.g. a secure server coupled to the internet. Participants include investors and bidders. In order to use the system, participants must register a username and a password in a conventional way. There may be a fee charged for registration and/or a commission may be charged for each successfully completed transaction. According to the presently implemented embodiment, separate login fields are provided for investors versus bidders. However, the system could be implemented to automatically distinguish between the two types of users based on the username registry.

Turning now to Figure 1, when an investor logs onto the system, a menu of options such as that shown in Figure 1 is presented. The user may select to: make an investment, review outstanding investments, go to a live auction, review today's auction results, and view auctions that require awarding. It should be noted that according to the presently preferred embodiment, the number of results available for a particular choice is indicated in parentheses to the right of the menu item. In addition to these action items, the menu shown in Figure 1 also provides options such as: review future auctions, generate reports, print wire transfer notification, and review previous auction results.

When a user selects "make an investment" from the menu of Figure 1, a data entry screen such as the one shown in Figure 2 is displayed. The data entry screen has several data fields; some are drop down menus. As shown in Figure 2, the data entry fields include: the amount of the investment, choice of fund from which the

money will be drawn, description of the fund/investment, date of investment, date of maturity, and when the auction opens/closes. Two pushbutton options are to "cancel" or to "confirm" the new investment. By choosing to confirm the investment, a screen such as that shown in Figure 3 is displayed. This screen contains all of the information entered in the previous data entry form plus a calculated display of the number of days between investment and maturity. Two pushbutton options are "no, let me edit it" and "yes, save it now". Choosing the "edit it" button returns to the screen shown in Figure 2. Choosing the "save it" button, will post the information to the auction list and allow the receipt of bids. The information posted will be available only to bidders. Investors will not be able to view the investments of each other.

When an investee logs onto the system, a menu such as that shown in Figure 4 is displayed. It will be appreciated that the options are different from those presented to investors. Exemplary options available to bidders include: review today's upcoming auctions, go to auctions, review today's auction results, review future auctions, view your award history, and review previous auction results. The number of items to be returned for each menu choice is preferably indicated in parentheses to the right of the menu item.

If the investee chooses to "review today's upcoming auctions", a screen such as that shown in Figure 5 is displayed. The list of auctions lists the name of the investor, the investment amount, the length of the investment in days, the fund, and the time bidding begins. No action can be taken from this screen (other than return to main menu); it is for information only.

If the investee chooses to “go to auctions”, a screen such as that shown in Figure 6 is displayed. The list in Figure 6 indicates the current auction time period, e.g. 9:15 am to 10:15, and the names of the investors, i.e. auctions. A “show” checkbox is provided next to the name of each auction and a “show auctions” pushbutton is provided at the bottom of the list. After selecting the auctions of interest by checking the checkboxes, pressing the “show auctions” button will cause the details of each auction to be displayed in a new screen such as that shown in Figure 7. In addition to showing the details of each investment, the screen of Figure 7 allows the bidder to enter and update bids. Moreover, the screen indicates the name of the top bidder in each auction. The screen can be refreshed manually or set to refresh periodically. E.g., by clicking on the **\*\*STOP\*\*** menu, a drop down list of refresh times will be displayed.

From the screen illustrated in Figure 7, additional information can be obtained about the auctions and the top bidders by moving the cursor over the name of the auction or bidder. For example, as shown in Figure 8, by moving the cursor over the name of the 2nd auction, additional information about that investment is displayed in a drop down box. By moving the cursor over the name of the top bidder, a ranking of bidders is displayed in a drop down box as shown in Figure 9.

When the auctions are completed, the results are available for viewing by both the investors and the bidders. In addition, referring back to Figure 1, investors can/must select “auctions that require awarding” from the main menu if the investor participated in a recent auction and received a bid. Figure 10 illustrates a list of the investments for a particular investor for recent (today’s) auctions). This screen may also be reached by selecting “award today’s bids now” from an “all auctions have

ended" screen which is automatically displayed when viewing the "live auctions" screen. For each investment (auction), an "award" button is presented. Pressing the award button brings up the award screen, e.g. the screen shown in Figure 11.

Figure 11 shows an example of an "award investment" screen for a particular auction. Details of the investment and the auction date and time are presented followed by a grid listing all the bidders in rank order. The investor may select which bidder will be awarded the investment. Normally, this will be the number 1 bidder but the investor can award the bid to #2,3,4, etc. bidder or reject all the bids. In an alternate embodiment of the invention, no choice is given but to award the bid to the number 1 bidder. After selecting the bidder, the award pushbutton is pressed and the award notification screen, e.g. Figure 12, is displayed.

Figure 12 illustrates an example of an award notice screen. The screen includes the name of the investor, the name of the winning bidder, details of the investment and the bid. Most of the information on this screen is generated automatically. Two fields accept manual data entry. The first at the top of the screen is the name of the bank from which the funds will be transferred to the bidder, if other than the default bank. The other is the account number at the bidder where the funds will be received. This account number may be entered by the bidder after the award notice is received. This screen also includes a "transmit" pushbutton. When this button is pressed, an email simulating this screen is transmitted to the bidder. According to the methods of the invention, the bidder then prints the email, fills in the account number (if necessary), fills in the ABA routing number, signs and dates the document. The document is then faxed (or scanned and emailed) back to the investor. Upon receipt of the signed document, the investor initiates the wire transfer.

There have been described and illustrated herein several embodiments of systems and methods whereby private and/or public organizations such as school districts and municipalities may maximize interest earnings on investments. While particular embodiments of the invention have been described, it is not intended that the invention be limited thereto, as it is intended that the invention be as broad in scope as the art will allow and that the specification be read likewise. For example, although the invention is especially intended for school districts and municipalities (e.g., villages, towns, water and fire districts, etc.), the invention is also applicable to other entities (e.g., colleges, corporations, non-profit corporations, etc.) who have relatively large cash assets to invest for a relatively short term. It will therefore be appreciated by those skilled in the art that yet other modifications could be made to the provided invention without deviating from its spirit and scope as so claimed.